

WHAT IS CLAIMED IS:

1. An image data processor for converting first image data into second image data, comprising:

5        a memory for storing pixel data corresponding to a target pixel to be processed within the first image data and pixel data corresponding to a plurality of peripheral pixels adjacent to the target pixel within the first image data;

10      a histogram circuit for generating a histogram of a brightness distribution of the pixel data stored in the memory; and

      a data processor circuit for replacing the pixel data of the target pixel with a value determined based on a maximum value of the histogram and for outputting the processed data; wherein

15      the output of the data processor circuit is the second image data.

2. The image data processor according to Claim 1, wherein

      the second image data is image data for displaying a replay image in which a special effect processing is applied to the first image data.

3. The image data processor according to Claim 1, further comprising:

      an extractor circuit for extracting predetermined bits of the pixel data stored in the memory circuit, wherein

25      the histogram circuit reads the predetermined bits of the pixel data extracted by the extractor circuit and generates the histogram.

4. The image data processor according to Claim 3, further comprising:

      a digit-complementing circuit for multiplying the output of

the data processor circuit by a predetermined multiplier to complement the bits of the output of the data processor circuit so that the number of bits of the output becomes identical to the number of bits of the pixel data.

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5. The image data processor according to Claim 1, further comprising:

a color data generator circuit for reading the second image data and generating color data; and

10 the color data, wherein

the color gain circuit sets the gain for color data of the target pixel to zero.

6. The method for processing image data to convert first image data

15 to second image data, the method comprising the steps of:

storing, in a memory, pixel data corresponding to a target pixel to be processed in the first image data and pixel data corresponding to a plurality of peripheral pixels adjacent the target pixel in the first image data;

20 generating a histogram of a brightness distribution of the pixel data stored in the memory; and

replacing the pixel data of the target pixel with a value determined based on a maximum value of the histogram and outputting the second image data.

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7. The method for processing image data according to Claim 6, wherein

the second image data is image data for displaying a replay image in which a special effect processing is applied to the first image data.

8. The method for processing image data according to Claim 6, further comprising the steps of:

5     extracting predetermined bits of the pixel data stored in the memory; and

reading the predetermined extracted bits of the pixel data and generating the histogram.

9. The method for processing image data according to Claim 8, further 10 comprising:

a digit-complementing step for multiplying the replaced pixel data of the target pixel by a predetermined multiplier to complement the bits so that the number of bits becomes identical to the number of bits of the pixel data.

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10. The method for processing image data according to Claim 6, further comprising the step of:

generating brightness data and color data based on the second image data, wherein

20       a gain for the color data of the target pixel is set to zero when the color data is generated.